



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

AW

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,433	03/01/2002	Hung Viet Ngo	C3043US;680-010481-US(PAR	3428
29683	7590	11/14/2003		
HARRINGTON & SMITH, LLP 4 RESEARCH DRIVE SHELTON, CT 06484-6212			EXAMINER KANG, JULIANA K	
			ART UNIT	PAPER NUMBER
			2874	

DATE MAILED: 11/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/087,433

Applicant(s)

NGO, HUNG VIET

Examiner

Juliana K. Kang

Art Unit

2874

AIN

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1.5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

DETAILED ACTION

Claim Objections

1. Claims 7 and 22 are objected to because of the following informalities: there is a typographical error in claim 7 line 1. "Claim 7" should be corrected to read "Claim 6." There is a typographical error, "cable0," in claim 22 line 2. Appropriate corrections are required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 29-35 are rejected under 35 U.S.C. 102(e) as being anticipated by Benner et al (U.S. Patent 6,568,861 B2).**

Regarding claim 29, Benner et al disclose an optical connector adapter assembly comprising a housing (15) having a mounting section (20) and a housing section with at least one passage (24a, 24b) extending through the housing for mating a pair of optical connectors (28) to the housing; and a pair of latch inserts (30) located in the at least one passage of the housing section, at least one latch insert being adapted for locking a corresponding connector of the pair of connectors to the housing; wherein the housing

Art Unit: 2874

is a one-piece member (see Fig. 4), and the at least one passage in the housing section has a centerline axis which is slanted relative to the mounting section.

Regarding claim 30, Benner et al disclose using a spring loaded connector (see column 3 line 35).

Regarding claims 31 and 32, Benner et al disclose at least one passage having a first guide channel (24a) and a second guide channel (24b) for guiding insertion of latches (see Figs. 1 and 2).

Regarding claim 33, Benner et al disclose that the housing (15) is made of a conductive material, zinc (see column 2 last line and column 3 lines 3-5).

Regarding claim 34, Benner et al disclose an EMI gasket (62) that surrounds the housing (see Fig. 4) and is disposed between the mounting surface of the housing and the panel (see column 2 lines 5-12 and column 4 lines 30-41).

Regarding claim 35, Benner et al show the housing section being generally tubular shape and the housing section aligned with the centerline axis of the passage.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Benner et al (U.S. Patent 6,568,61 B2), and further in view of Mayercik et al (U.S. Patent 6,461,053 B1).

Regarding claim 1, Benner et al disclose a fiber optic adapter mountable through a panel opening on a panel (60), the mount comprising: a frame with a mounting section for attaching the mount to the panel, and a housing section (15) with an aperture (22a, 22b) adapted for connecting at least one multi-fiber optical connector; wherein the aperture in the housing has an axis of symmetry which is slanted relative to the mounting section, and wherein the axis of symmetry of the aperture is angled relative to a normal axis of the panel when the mounting section is mounted to the panel.

However, Benner et al lacks a row of multiple optical fibers that are aligned generally vertically. Mayercik et al teach a row of multiple optical fibers connected in a vertical manner (see column 3 lines 56-59 and Figs. 4 and 6). It would have been obvious to one of ordinary skill in the art at the time the invention to use a row of multiple optical fibers that are aligned generally vertically in Benner et al as taught by Mayercik et al since increasing the number of optical fiber lines within a given amount of space is desirable for higher density interconnections (see column 1 lines 8-14) and mounting the connector in vertical orientation minimize the board real estate (see column 3 lines 56-59).

Regarding claim 2, 3, and 5, Benner et al teach the housing section (15) that is slanted relative to the mounting section and having the aperture (22a, 24a) extending through the panel (60) (see Fig. 9).

Regarding claim 4, Benner et al/Mayercik et al teach all the claimed invention except the MPO or MTP connectors. However, Benner et al teach using any conventional connectors (see column 3 lines 30-32). MPO and MPT connectors are among the conventional connectors in the optical connector art. Thus, it would have been obvious to one with ordinary skill in the art to use any conventional connectors including an MPO or MPT connector in Benner et al.

Regarding claims 6 and 7, Benner et al teach an EMI gasket (62) that surrounds the housing (see Fig. 4) and is disposed between the mounting surface of the housing and the panel (see column 2 lines 5-12 and column 4 lines 30-41).

Regarding claims 8, and 9-17, as described above, Benner et al/ Mayercik et al teach the claimed invention including a boot and a row of optical fibers. However, Benner et al/Mayercik et al do not specifically teach a twist boot and the row of optical fibers extending from the connector having a generally twisted shape. It is well known in the art to use a flexible boot at the end of the connector to provide strain relief. The optical fibers mounted on a panel using optical connectors don't generally extend outwardly straight but rather the optical fibers usually hang downwardly. And when the row of optical fibers with a flexible boot is hanging downwardly it would have a generally twisted shape. The boot section that is up-against the connector would be straight while the other end of the boot would be curved because of the optical fibers that are hanging downwardly. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the fibers hang downwardly (which makes the

fibers and boot to have generally twisted shape) in Benner et al/Mayercik et al in order to save space and to protect optical fibers from damaging.

Regarding claim 18, Benner et al/Mayercik et al teach all the claimed invention except the MPO or MTP connectors. However, Benner et al teach using any conventional connectors (see column 3 lines 30-32). MPO and MPT connectors are among the conventional connectors in the optical connector art. Thus, it would have been obvious to one with ordinary skill in the art to use any conventional connectors including an MPO or MPT connector in Benner et al.

Regarding claims 19, 20, 24, 25, 26, and 28, as described above, Benner et al/Mayercik et al teach the claimed invention including a boot (see column 3 lines 66-67 of Benner et al) connected to the connector.

Regarding claim 22, Benner et al/Mayercik et al teach the claimed limitations of the optical fibers being disposed along the major side (see Fig.6 of Mayercik et al).

Regarding claims 21, 23 and 27, as described above, Benner et al/ Mayercik et al teach the claimed invention including a boot and a row of optical fibers. However, Benner et al/Mayercik et al do not specifically teach a twist boot and the row of optical fibers extending from the connector having a generally twisted shape. It is well known in the art to use a flexible boot at the end of the connector to provide strain relief. The optical fibers mounted on a panel using optical connectors don't generally extend outwardly straight but rather the optical fibers usually hang downwardly. And when the row of optical fibers with a flexible boot is hanging downwardly it would have a generally twisted shape. The boot section that is up-against the connector would be straight while

the other end of the boot would be curved because of the optical fibers that are hanging downwardly. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the fibers hang downwardly (which makes the fibers and boot to have generally twisted shape) in Benner et al/Mayercik et al in order to save space and to protect optical fibers from damaging.

8. Claims 36 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Benner et al as applied to claim 29 above, and further in view of Roth (U.S. Patent 6,079,881).

As described above, Benner et al disclose all the claimed limitations except a door pivotally mounted to the housing. Roth teaches an optical fiber connector receptacle comprising a door (36) pivotally mounted to the housing for covering an opening of the housing and the door is spring (56) loaded to bias the door to a closed position (see column 3 lines 55-63) to ensure against light leakage (column 4 lines 24-26). Thus, it would have been obvious to one with ordinary skill in the art at the time the invention was made to use a pivotally mounted door in Benner et al as taught by Roth to protect the light leakage.

9. Claim 38 is rejected under 35 U.S.C. 103(a) as being obvious over Benner et al.

Regarding claim 38, Benner et al disclose all the claimed invention except the MPO or MTP connectors. However, Benner et al teach using any conventional connectors (see column 3 lines 30-32). MPO and MPT connectors are among the

conventional connectors in the optical connector art. Thus, it would have been obvious to one with ordinary skill in the art to use any conventional connectors including an MPO or MPT connector in Benner et al.

10. Claims 39-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Benner et al (U.S. Patent 6,568,861 B2), and further in view of Puetz (U.S. Patent 6,347,888 B1).

Regarding claims 39-40, as described above, Benner et al disclose the claimed invention including EMI gasket. However, Benner et al do not specifically teach a pair of inner adapter housings. Puetz teach an inner housing for mating with different types of connectors. Thus, it would have been obvious to use inner housings in Benner et al as taught by Puetz to make the connections more versatile.

11. Claims 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Benner et al (U.S. Patent 6,568,861 B2)/Puetz (U.S. Patent 6,347,888 B1) and further in view of Roth (U.S. Patent 6,079,881).

As described above, Benner et al/Puetz disclose all the claimed limitations except a door pivotally mounted to the housing. Roth teaches an optical fiber connector receptacle comprising a door (36) pivotally mounted to the outer housing for covering an opening of the housing and the door is spring (56) loaded to bias the door to a closed position (see column 3 lines 55-63) to ensure against light leakage (column 4 lines 24-26). Thus, it would have been obvious to one with ordinary skill in the art at the time the invention was made to use a pivotally mounted door in Benner et al/Puetz as taught by Roth to protect the light leakage.


Conclusion

12. The prior art documents submitted by applicant have been considered and made of record (note the attached copy of form PTO-1449).

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juliana K. Kang whose telephone number is (703) 305-6259. The examiner can normally be reached on Mondays and Thursdays 7:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rod Bovernick can be reached on (703) 308-4819. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-3072.


Juliana Kang
November 11, 2003